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August 27, 2001

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FEDERAL COMMUNICATIONS COMMISSION  
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**BY HAND DELIVERY**

Ms. Magalie Roman Salas  
Secretary  
Federal Communications Commission  
445 12th Street, SW  
Washington, DC 20554

Re: Comments of Sirius Satellite Radio Inc. in ET Docket No. 99-231

Dear Ms. Salas:

Enclosed are an original and four copies of the Comments of Sirius Satellite Radio Inc. on the Further Notice of Proposed Rulemaking and Order in the above referenced docket.

In the event there are any questions regarding this matter, please let me know.

Respectfully submitted,

  
Tonya Rutherford\*  
of LATHAM & WATKINS

No. of Copies rec'd 049  
LSIABODE

\*Admitted to practice in Georgia only. Bar application in the District of Columbia pending.

Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554

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FEDERAL COMMUNICATIONS COMMISSION  
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In the Matter of	)	
	)	
Amendment of Part 15 of the Commission's	)	
Rules Regarding Spread Spectrum Devices	)	
	)	ET Docket No. 99-231
Wi-LAN, Inc.	)	DA 00-2317
Application for Certification of an Intentional	)	
Radiator Under Part 15 of the Commission's	)	
Rules	)	

**COMMENTS OF SIRIUS SATELLITE RADIO INC.**

Sirius Satellite Radio Inc. ("Sirius"), through its attorneys, hereby offers the following Comments on the Further Notice of Proposed Rulemaking released in the above-captioned proceeding on May 11, 2001.

**I. INTRODUCTION**

In May of this year, the Commission released the Further Notice,<sup>1</sup> which sought comment on proposed amendments to Part 15 of the Commission's Rules. The proposed amendments are designed to improve spectrum sharing by unlicensed devices operating in the 2.4 GHz band, to provide for the introduction of new digital transmission technologies, and to eliminate certain regulations for spread spectrum systems. Sirius supports the Commission's proposed rules, but urges the Commission to ensure that licensed services are protected from interference from unlicensed devices.

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<sup>1</sup> *In the Matter of Amendment of Part 15 of the Commission's Rules Regarding Spread Spectrum Devices, Wi-LAN, Inc. Application for Certification of an Intentional Radiator Under Part 15 of the Commission's Rules, Further Notice of Proposed Rulemaking and Order, FCC 01-158 (rel. May 11, 2001) ("Further Notice").*

Sirius holds a license issued by the Commission to provide digital audio radio service by satellite ("SDARS"). In 1995, the Commission allocated spectrum in the 2310-2360 MHz band for SDARS.<sup>2</sup> Sirius was one of the two successful bidders in the SDARS licensing auction. In 1997, the Commission authorized Sirius to launch and operate a satellite system in order to provide SDARS in the 2320-2332.5 MHz frequency band.<sup>3</sup> SDARS will provide continuous nationwide radio programming with digital sound. The service also is expected to increase both the availability of programming to underserved communities and the variety of programming available to the public in general. Sirius has successfully launched all three of its planned in-orbit satellites, and expects to begin commercial service for consumers later this year.

## II. DISCUSSION

Historically, the Commission has viewed Part 15 regulation as providing a valuable tool to encourage innovation in new technologies,<sup>4</sup> and the Commission today remains committed to promoting such innovation. As the Commission noted in the Further Notice, the spread spectrum rules have allowed the speedy introduction of many devices that are of benefit to consumers and businesses.<sup>5</sup> In 1999, the Commission initiated this proceeding to provide for the continued development of spread spectrum technology. Sirius notes that the Commission has administered the successful regulation of Part 15 devices. Sirius supports the continued

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<sup>2</sup> *Amendment of the Commission's Rules with Regard to the Establishment and Regulation of New Digital Audio Radio Services*, Report and Order, 10 FCC Rcd 2310 (1995).

<sup>3</sup> *Satellite CD Radio Inc. Application for Authority to Construct, Launch and Operate Two Satellites in the Satellite Digital Audio Radio Service*, Order and Authorization, 13 FCC Rcd 7971 (1997). Satellite CD Radio Inc. changed its name to Sirius Satellite Radio Inc. in November, 1999.

<sup>4</sup> *Revision of Part 15 of the Rules Regarding the Operation of Radio Frequency Devices Without an Individual License*, First Report and Order, 4 FCC Rcd 3493, at 3495 (1989) (*Part 15 1989 Order*) at ¶¶ 6-12.

<sup>5</sup> *Further Notice* at ¶ 7.

introduction of non-interfering Part 15 devices and the significant consumer and business benefits they are likely to yield.

Part 15 devices may not cause harmful interference to licensed services.<sup>6</sup> The rules state in absolute terms that operation of Part 15 devices is subject to the condition that “no harmful interference is caused.”<sup>7</sup> The rules acknowledge, however, that the emission limits specified in Part 15 will not prevent all instances of harmful interference.<sup>8</sup> Should harmful interference occur to licensed users of the radio frequency spectrum, even if the device is operating within the emission limits, the rules specify that the operator of the offending Part 15 device shall cease operation.<sup>9</sup> Sirius urges the Commission to enforce strictly the requirement that Part 15 devices not cause harmful interference to licensed services, such as SDARS.

Under the Commission’s current rules, the field strength of radiated emissions from unintentional radiators operating above 960 MHz at a distance of 3 meters shall not exceed 500  $\mu\text{V/m}$  at 3 m. Sirius submits that the current out-of-band emission limits do not sufficiently protect SDARS receivers from interference by Part 15 devices. For a single Part 15 device, a field strength limit of no greater than 14.6  $\text{dB}\mu\text{V/m}$  at 3 m in SDARS’ licensed spectrum is necessary to protect SDARS’ downlink signals. If SDARS is not adequately protected from interference from Part 15 devices, the rapid deployment of advanced digital audio radio services may be significantly threatened.

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<sup>6</sup> 47 C.F.R. § 15.5(b).

<sup>7</sup> *Id.* Harmful interference is defined as “any emission, radiation, or induction that . . . seriously degrades, obstructs, or repeatedly interrupts a radio communications service operating in accordance with this chapter.” 47 C.F.R. § 15.3(m).

<sup>8</sup> 47 C.F.R. § 15.15(c).

<sup>9</sup> 47 C.F.R. §§15.5(c), 15.15(c).

With the proliferation of unlicensed devices that are operating, or are expected to operate, under Part 15, there is increased opportunity for aggregate interference to licensed spectrum use. The Commission itself admits<sup>10</sup> that the 2.4 GHz band is becoming increasingly crowded.<sup>11</sup> This potential congestion is relevant to licensed services, such as SDARS, because of the increase in the noise floor. The out-of-band emission limits in the Part 15 rules, however, were established based on the potential interference from a single Part 15 device and do not take into account cumulative effects that could occur if there is a high level of equipment proliferation.<sup>12</sup> For multiple Part 15 devices, a field strength limit of no greater than 18.6 dBμV/m at 3 m is necessary to protect SDARS' downlink signals.<sup>13</sup>

### III. CONCLUSION

For the reasons above, Sirius respectfully requests that the Commission ensure that spread spectrum and other Part 15 devices do not cause harmful interference to licensed services, such as SDARS. For a single Part 15 device, a field strength limit of no greater than 14.6 dBμV/m at 3 m in SDARS' licensed spectrum, and for multiple Part 15 devices, a field strength limit of no greater than 18.6 dBμV/m at 3 m, would ensure sufficient protection for SDARS.

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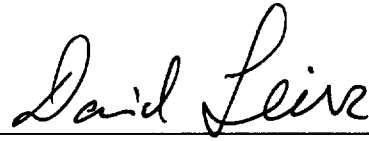
<sup>10</sup> *Amendment of Parts 2 and 15 of the Commission's Rules Regarding Spread Spectrum Transmitters*, Notice of Proposed Rulemaking, 11 FCC Rcd 3068 (1996) at ¶ 10 (acknowledging that the 2450 MHz band is now becoming crowded, particularly with mobile units).

<sup>11</sup> Lisa Guernsey, "What's next: Preparing for collision of wireless services," New York Times, Apr. 27, 2000 at G13.

<sup>12</sup> *Revision of Part 15 of the Commission's Rules Regarding Ultra-Wideband Transmission Systems*, Notice of Inquiry, 13 FCC Rcd 16376 (1998) (acknowledging that the Part 15 rules do not take into account cumulative effects that could occur if there is a high level of equipment proliferation).

<sup>13</sup> This is the approximate level the Commission used in recent SDARS interference coordination agreements with Canada and Mexico.

Respectfully submitted,

A handwritten signature in black ink that reads "David Leive". The signature is fluid and cursive, with the first name "David" and last name "Leive" clearly distinguishable. It is positioned above a horizontal line.

Robert Briskman  
Sirius Satellite Radio Inc.  
Technical Executive

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Dated: August 27, 2001

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Columbia bar application pending.